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## 1 TRANSPORTATION

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2 *Transportation facilities in Norwich include: state, town, and private roads; railroad lines; public transit*  
3 *routes; bikeways; and pedestrian paths. These facilities provide connections between homes, businesses,*  
4 *recreational facilities and workplaces in the community, the region and beyond.*

5 *We are in an era of significant change in the use of energy and the management of energy resources.*  
6 *There is a direct relationship between land use, energy consumption and transportation. Better roads may*  
7 *promote more intense land use if zoning provisions permit, and poor roads will discourage most types of*  
8 *land use. Public transportation and compact development will result in reduced energy use. Land use*  
9 *planning that creates clusters of housing will facilitate public transit, bicycling and walking. Transportation*  
10 *planning should look at all modes of travel and be coordinated with land use planning and energy*  
11 *conservation.*

12 *This chapter will not only focus on the most common form of transportation—the automobile—but will*  
13 *also consider alternative modes of transportation, including bicycling, walking, and regional public transit.*  
14 *Other aspects of transportation planning for Norwich include support for regional coordination and*  
15 *cooperation, sustainability, energy conservation, and planning for more compact development in*  
16 *appropriate places and at a scale appropriate for Norwich in accordance with smart development*  
17 *principles.*

### 18 Roads In Norwich

#### 19 **Interstate and State Highways**

20 There are 18.3 miles of state-maintained highways in Norwich. These are generally the most heavily  
21 traveled roads in town. As shown in Figure 9-1, traffic levels on these roads continue to increase.

#### 22 **Interstate 91**

23 *Interstate 91, the primary north-south thoroughfare in western New England, was completed through*  
24 *Norwich in the early 1970s and runs north-south along the town's eastern boundary. I-91's southern*  
25 *terminus is the junction with I-95 in New Haven, Connecticut, while its northern end is at Derby Line,*  
26 *Vermont, at the Canadian border. Its intersection with I-89 five miles south at White River Junction*  
27 *provides Norwich with direct interstate highway access to Boston, Montreal, New York City and points*  
28 *between and beyond.*

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1 In Norwich, the highway travels 7.6 miles from the Hartford to Thetford town lines with Exit 13 located in  
2 Norwich less than one mile north of the Hartford line and south of Norwich Village. ~~In 2001, Norwich's  
3 segment of interstate had a sufficiency rating of 95.6 out of 100. The average daily traffic between Exits  
4 12 and 13 in 2015 was 17,900 vehicles; between Exits 13 and 14, it was 12,100 vehicles.~~

#### 5 U.S. Route 5

6 U.S. Route 5 is a two-lane rural road that parallels the Connecticut River along much of the 8.5 miles it  
7 travels through Norwich. U.S. Route 5 is part of the bi-state Connecticut River Scenic Byway and a popular  
8 bicycle route. South of I-91 Exit 13, Route 5 runs to the west of the interstate. From the exit in Norwich,  
9 Route 5 travels into the Norwich village area and then eastward crossing under the interstate to continue  
10 north on the east (or river) side of I-91. This segment of the highway is lightly traveled and highly scenic.  
11 South of Exit 13, Route 5 averages around 5,000 vehicles per day, while between the exit and the  
12 Norwich village area the number of trips per day is about 6,000. North of the village area, traffic on Route  
13 5 is less than 1,500 vehicles per day.

#### 14 Vermont Route 10A

15 Vermont Route 10A is a 0.9-mile connector between I-91 Exit 13 southbound and the Ledyard Bridge over  
16 the Connecticut River that links Norwich to downtown Hanover, New Hampshire. Route 10A is heavily  
17 traveled, with more than 14,000 vehicles crossing the bridge each day. This state highway had a  
18 sufficiency rating of 68.2 out of 100 in 2001, due more to safety and traffic issues than to the physical  
19 condition of the road. During the peak morning and afternoon commuting hours, traffic on Route 5  
20 between the village area and Exit 13, and Route 10A from the exit to the bridge, can become congested  
21 as vehicles become backed up between Norwich and Hanover. Any increase in development that involves  
22 travel to New Hampshire via Route 10A during peak commuting times must address the current  
23 congestion on this route.

24 ~~The bridge connecting Norwich and Hanover has an interesting history of its own. Built in 1859, the  
25 Ledyard Free Bridge was the first, and for many years the only, non-toll bridge over the Connecticut River.  
26 The Ledyard Bridge has been rebuilt four times due to disasters and deterioration. Construction on the  
27 current bridge was completed in 1999.~~

#### 28 River Road

29 ~~River Road is a 0.8-mile state highway connector between Vermont Route 10A at the Ledyard Bridge and  
30 U.S. Route 5 North along the Connecticut River. It does not have a state route number, but is a  
31 designated state highway. Due to the proximity of the River Road to the Connecticut River to the east and  
32 the railroad, substantive changes to the road are not possible.~~

1 **Town Highways**

2 Background

3 ~~In the late 1700s, when Norwich was first settled, in addition to the King's Highway and early Post Roads,~~  
4 ~~many of the roads were laid out and built by original investors/settlers to encourage development and~~  
5 ~~increase the value of the land. Early landowners allowing roads to cross their property were compensated~~  
6 ~~with additional land. Agricultural and forest products were processed in the town for local trade and~~  
7 ~~export. The commerce of the town depended on roads to move goods around town and to the river, and~~  
8 ~~later to the railroad depots in Lewiston and Pompanoosuc. By the mid 1800s, there were more than 100~~  
9 ~~miles of roads as compared to the 85 miles currently maintained by the town and state.~~

10 ~~As the population moved west, many of the homesteads were abandoned and roads to less productive~~  
11 ~~land were no longer used or maintained. By 1931, road mileage had decreased to 72 miles. Some of these~~  
12 ~~old roads can no longer be seen on the ground but may still be legal rights of way that exist in the town~~  
13 ~~records. (See Ancient Roads).~~

14 ~~Even with the population now exceeding the historic peak of the 1830s, very few new town roads have~~  
15 ~~been built. Most development has occurred along existing roads. The exceptions are roads in residential~~  
16 ~~developments, such as Hawk Pine, McKenna Road, Carpenter Street, Hazen Street, Cliff Street, and~~  
17 ~~Huntley Street. There has been some interest in upgrading sections of Class 4 roads to Class 3 to~~  
18 ~~accommodate more development and provide more interconnections between existing roads, but this~~  
19 ~~has not happened.~~

20 The town maintains 76 miles of its 96 miles of public roads in Norwich with some financial aid from the  
21 state, based on the class and mileage of the town roads.

22 Road Class and Function

23 Norwich's 96 miles of town road are classified as follows:

**Comment [RF1]:** Replace with table

- 24 ● ~~Class 1: Heavily traveled roads that are extensions of the state highway system and are assigned~~  
25 ~~a state route number. Currently, there are no Class 1 town roads in Norwich.~~
- 26 ● ~~Class 2: Major roads that do not meet the criteria for a Class 1 road but still may have a state~~  
27 ~~route number and serve as through roads from one town to another. Route 132, Union Village~~  
28 ~~Road and Beaver Meadow Road are Class 2 roads. Class 2 roads are usually paved. Norwich has~~  
29 ~~14.5 miles of Class 2 roads.~~
- 30 ● ~~Class 3: Roads that are maintained to be passable at all times of the year by a regular passenger~~  
31 ~~car and are not Class 1 or Class 2. They are usually gravel roads, although in Norwich there are 11~~  
32 ~~miles of paved Class 3 roads. Norwich has a total of 61.2 miles of Class 3 roads.~~

- ~~• Class 4: Non-maintained or partially maintained town roads. The town receives no funds from the state to maintain these 19.1 miles of roads. Some Class 4 roads are privately maintained by landowners and some are essentially trails which may or may not be passable by a vehicle.~~
- ~~• Legal Trails: Town-owned rights-of-way that are not maintained and may not be open to vehicles. There are approximately 3.5 miles of legal trails in Norwich.~~

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VTrans has also classified the town's roads based on their function. Routes 5, 10A and 132 are major collectors; they serve primarily traffic traveling between destinations within a region. Union Village Road, River Road and portions of Main Street are designated as minor collectors, which connect smaller communities and collect traffic from local roads to major collectors.

### Road Maintenance and Construction

The Selectboard has responsibility for building and maintaining town roads. The Selectboard appoints the Town Manager as Road Commissioner. ~~The Town Manager hires a Director of Public Works. The Town Manager is charged with overseeing the roads and legal rights-of-way, and overall maintenance strategies, and is the Selectboard's liaison with the Director of Public Works. The Director of Public Works supervises the Highway Department, the workers, and equipment. For an additional discussion of the Highway Department, see Chapter 7, Community Facilities and Services.~~

The town has several ordinances and policies relating to town roads. These include:

Comment [RF2]: Replace with table check dates

- Road Specifications - 1976
- Class 4 Road Policy - 2/28/89
- Scenic Road Ordinance - 10/30/89
- Criteria for Accepting Roads - 12/8/92
- Ordinance Relating to Use of Trails - 12/8/01
- Private Highway Specification Ordinance - 2/11/03
- ~~• Several Speed and Parking Ordinances~~

### Road Maintenance

Road maintenance is budgeted in three categories: winter maintenance (snow removal and sanding), summer maintenance (grading, paving, ditching, and replacing culverts), and capital improvements (bridge replacement, road relocation, and widening and straightening).

~~Road maintenance is always a difficult balance. With a limited budget, is it better to completely rebuild or reclaim a short section of highway versus patching or skim-coating longer sections only to repave a few years later? On unpaved roads, is it better to add gravel each year or to rebuild the roadbed and ditches to avoid erosion? These are the kinds of decisions being made by the Town Manager and the Director of Public Works with budgets approved by the Selectboard and voters. The inconveniences of badly~~

~~deteriorated roads or closed bridges are not well received by the taxpayers, nor are ever increasing highway budgets.~~

In 2007, a study, the Marcon Report, of the conditions of paved roads and the re-paving program indicated that the town was falling behind and that roads were deteriorating at a substantially faster rate than repairs were being made. The cost of rehabilitating a road increases substantially as the condition worsens. The town is now using a computerized Road Surface Management System (RSMS) to plan for long-range maintenance and capital improvements.

### Upgrading Existing Roads

~~The town needs to make informed decisions on whether existing roads will need to accommodate additional traffic and, if so, whether they can or should be upgraded. Widening, straightening, or paving may increase safety, but may also increase the speed of traffic, encourage more development, and destroy the scenic beauty and rural character of Norwich's back roads. The town should find a way to provide safe roads without improving them to typical Class 2 or 3 standards if it will adversely affect the rural character of the town.~~

**Comment [RF3]:** Not sure about the data on increased trips. Probably has peaked and will fall given demog prof. and changing behaviors

### Class 4 Roads

Class 4 roads are town highways that are not maintained for year-round travel. The town must replace larger culverts and repair bridges on Class 4 roads, but they are not otherwise maintained. A landowner whose property is accessible by a Class 4 road may maintain the road privately with permission from the Town Manager.

~~Class 4 roads form a part of a long-standing network of trails/tracks used for recreational purposes. In the future, some Class 4 roads could be upgraded to Class 3 to increase the efficiency and safety of the town's road system or to allow development in suitable areas. Many areas along the western and northern boundaries of Norwich are inaccessible from each other without first traveling back to the center of the town. Upgrading of some existing Class 4 roads to Class 3 would create alternative routes for emergency vehicles and allow detours if roads are closed in major storms. In some cases, Class 4 roads provide the only access to individual properties. Careful consideration should be given to the value of Class 4 roads and how they may contribute to the quality of life of Norwich's residents.~~

### Legal Trails

A legal trail is a public right-of-way that may previously have been a town road and is open to the public for recreational use, but from which the town may exclude motor vehicles. It may be the same width as the town highway, or a lesser width if so designated. The Selectboard may also create a new trail with a designated width. The Selectboard adopted an ordinance in 2001 to regulate the use of its legal trails.

Most of the 3.5 miles of legal trails in Norwich are designated for recreational use and were converted

1 from Class 4 town highways within the last 10 years. The town’s ordinance prohibits the use of motor  
2 vehicles, other than vehicles being used for farming and snowmobiles, on trails unless a special permit is  
3 approved by the Selectboard. A legal trail may be upgraded to a Class 4 or Class 3 town road in the future.

#### 4 Ancient Roads

5 ~~Ancient roads refer to old public rights of way created in the early days of Norwich that are no longer~~  
6 ~~used as roads or trails. Some of these roads, although long forgotten, may have never been legally~~  
7 ~~discontinued and may still be town rights of way, creating an unanticipated cloud on the title of property.~~  
8 ~~These forgotten roads could be considered an asset of the town providing recreational trails and access.~~  
9 ~~In 2006, the state legislature passed Act 178 in order to resolve this issue by requiring towns to find~~  
10 ~~“unidentified corridors” by July 2010 and to reclassify them to trails or roads, or to discontinue them by~~  
11 ~~2015. The Norwich Ancient Roads Committee has been working to identify potential “unidentified~~  
12 ~~corridors” to present to the Selectboard for re-classification or discontinuance.~~

#### 13 New Roads

14 ~~In recent years, new roads in Norwich have been privately built to accommodate specific new~~  
15 ~~developments or to relocate an existing road. New private roads constructed by developers are under the~~  
16 ~~jurisdiction of the Development Review Board and must meet private highway standards, if serving two to~~  
17 ~~10 residential lots, and Class 3 road specifications for 11 or more lots. There is a more detailed discussion~~  
18 ~~of private roads below.~~

19 ~~Occasionally there are requests by developers or landowners for the town to take ownership, and~~  
20 ~~thereby responsibility for maintenance, of a private road. In December 1992, the Selectboard adopted a~~  
21 ~~policy for accepting ownership of private roads based on the density of housing on the road and other~~  
22 ~~uses of the road, such as connecting with other town roads or accessing public lands. Farrell Farm Road,~~  
23 ~~which provides access to more than 20 homes, is the only private road to be accepted as a town highway~~  
24 ~~recently. The landowners paid to have the road improved to town highway standards prior to the town’s~~  
25 ~~acceptance in 2008.~~

#### 26 Norwich Village

27 Norwich village (essentially, the Village Business District and some of the Village Residential I District  
28 area), like many Vermont town centers, has been experiencing increased traffic as the number of homes  
29 in outlying rural areas and neighboring towns has continued to increase. ~~Norwich’s topography and road~~  
30 ~~network has amplified this effect, as often the only way to travel from one place to another within town is~~  
31 ~~to pass through the village area. Additionally,~~ the majority of the town’s employed population commutes  
32 through the Norwich village area to reach I-91 or cross the bridge to Hanover. At the same time, parents  
33 and buses are converging on the village area to transport children to and from school.

Comment [RF4]: Really?

1 ~~Given that such a large percentage of Norwich commuters are headed to one of several major employers,~~  
2 ~~public transit should be able to reduce the number of people commuting in their own cars. In fact, Bbus~~  
3 ~~service between the Norwich village area and Hanover has existed for decades. The Park and Ride lot at~~  
4 ~~Huntley Meadows receives low/moderate/high [select one] use. The installation of EV charging station~~  
5 ~~will add an important function to the facility. The lack of parking within the village area, however,~~  
6 ~~prevents many commuters from choosing to ride the bus. Development of park and ride lots has been~~  
7 ~~considered for a number of years. An appropriate location has yet to be acquired that would eliminate~~  
8 ~~the need for most commuters to drive through the Norwich village area, although the recent~~  
9 ~~development of a park and ride lot at Huntley Meadows has attracted increasing use. Concerns have also~~  
10 ~~been raised that out-of-town residents would drive into Norwich, park their cars and take the bus, thus~~  
11 ~~increasing traffic entering town from the south or east.~~

12 In addition to periods of heavy traffic, limited parking and pedestrian access discourage walking and limit  
13 the ~~growth potential~~use of downtown businesses.

#### 14 **Scenic Roads**

15 ~~Norwich has many beautiful rural road corridors that provide pleasant travel and vistas for residents and~~  
16 ~~visitors alike. In 1977, legislation was passed by the state that provides towns with the authority to~~  
17 ~~designate roads as scenic. In 1989, the town enacted its own Scenic Road Ordinance in order to keep the~~  
18 ~~designation local and not listed in state tourism publications. A total of 5.2 miles of roadway, including~~  
19 ~~Bragg Hill Road, Jericho Street and Goodrich Four Corners Road, have been designated as scenic. The~~  
20 ~~Scenic Road Ordinance does not actually protect the “scenic vistas,” but it does regulate the maintenance~~  
21 ~~and removal of features within the road right-of-way (usually 50 feet wide) such as trees and stone walls~~  
22 ~~in order to preserve scenic character. Changes during the 2000s in the zoning and subdivision regulations~~  
23 ~~have offered some protection to scenic vistas along many of these and other roads.~~

#### 24 **Private Roads and Driveways**

25 ~~Private roads in Norwich range in length from short driveways serving individual homes to long shared~~  
26 ~~drives accessing many houses. These private roads are maintained either by an individual landowner, a~~  
27 ~~group of landowners, or a landowner or condominium association. The town has five primary concerns~~  
28 ~~with private roads:~~

- 29 ~~● That the intersections of private roads with town roads are designed to be safe and not cause~~  
30 ~~damage to the town roads;~~
- 31 ~~● That roads are designed, built, and maintained so that emergency vehicles are able to reach~~  
32 ~~residences;~~

- ~~• That new roads and drives are designed, built and maintained using appropriate stormwater management techniques and infrastructure to minimize run-off, sedimentation and flooding of downslope infrastructure, property and waterways;~~
- ~~• That new roads are built with minimum impact on significant natural resources and scenic views; and~~
- ~~• That private roads are built and maintained to standards appropriate for their intended use in order to avoid the town ultimately having to take responsibility for hazardous, inadequate or deteriorated infrastructure.~~

~~The town has the authority and responsibility to regulate private roads with regard to these issues, and does so with three ordinances:~~

- ~~• The Norwich Driveway Access Ordinance, administered by the Director of Public Works, regulates the design and location of any new private road or driveway where it intersects with a town highway.~~
- ~~• The Norwich Private Highway Specifications Ordinance regulates the construction of any new private road serving from two to 10 residences or lots.~~
- ~~• The Norwich Zoning Regulations regulate the design of new driveways serving a single lot or residence.~~
- ~~• The Norwich Private Highway Specifications and the Norwich Zoning Regulations are administered by the Zoning Administrator and the Development Review Board. Pre-existing roads are exempt unless their use changes. The Natural and Historic Resources section describes the type of natural and scenic areas that driveways and private roads should not adversely impact, such as wetlands and ridgelines.~~

### **Culverts**

~~Recent studies have shown that roadway and roadside drainage systems that fail to convey the amount of water they are receiving from adjoining property are a significant source of flood-related damage to roads and associated infrastructure. This includes undersized or blocked culverts. Since 2013, the Town of Norwich has maintained a bridge and culvert inventory that assesses the condition of these structures and aids in the prioritization of replacement and repair work each year, including upgrading of undersized culverts.~~

~~As of July 1, 2017, per requirements of Act 64 and the Vermont Clean Water Act, municipalities are required to apply for the Municipal Roads General Permit coverage on all town roads. The Municipal Roads General Permit is intended to achieve significant reductions in stormwater-related erosion from municipal roads, both paved and unpaved. Norwich will implement a customized, multi-year plan to stabilize their road drainage system. The plan will include bringing road drainage systems up to basic maintenance standards and additional corrective measures to reduce erosion as necessary to meet a total maximum daily load (TMDL) or other water quality restoration effort.~~

**Comment [RF5]:** From TRORC draft Trans Ch [Mar, 2019]

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**Access Management**

~~Access management describes a set of strategies that can be applied by municipalities to prevent congestion and improve safety as development occurs along road corridors. Each new access (driveway or road) that intersects with existing roads, particularly main traffic corridors, introduces a new potential interruption to the flow of traffic and increases the possibility of traffic accidents. The Vermont Agency of Transportation has developed Access Management Program Guidelines, which include recommended policies, regulations and road design standards aimed at minimizing the number of new access points and improving the safety of access points.~~

~~Currently, shared driveways are the most commonly used access management technique in Norwich. Not only do shared driveways reduce the number of new access points intersecting town roads, they also have numerous environmental benefits due to reduced construction and maintenance requirements and a reduction in the amount of impervious surface needed to serve new development.~~

**Public Transportation**

Norwich residents’ access to public transportation includes taxis, a regional bus system (Advance Transit), a van for seniors based at the senior center in White River Junction and a district school bus system. There is also inter-city bus service to major cities and airports (Vermont Transit and Dartmouth Coach), train service (Amtrak), and a regional airport in West Lebanon connecting the region to New York, Boston and beyond.

~~There are a number of difficulties in serving a rural community such as Norwich with local public transportation, the primary one being that typically, there are relatively few people going to the same place at the same time on a regular basis. In addition, with relatively uncongested highways and the general availability of parking, there is little motivation for drivers to give up the convenience of a personal vehicle. The cost of providing service convenient enough to entice a large percentage of drivers out of their cars and onto public transit may far exceed the benefits of less pollution and greater energy conservation. However, as fuel prices and traffic have increased, and parking in Hanover has become scarcer, more commuters are using public transit, bicycles and car pools.~~

The current Advance Transit bus system connects the Norwich village area with hospitals, employment centers, and retail shopping areas throughout the Upper Valley. Advance Transit’s Brown Route makes several stops in the Norwich village area, in downtown Hanover and around the Dartmouth campus, with service approximately twice an hour between 6:30 a.m. and 5:30 p.m. on weekdays. During peak commuting hours, the Brown Route includes a stop at Norwich’s park-and-ride lot at Huntley Meadow.

**Comment [RF6]:** Shrink, check for details

1 From Hanover, connections to other Advance Transit routes can take passengers to destinations around  
2 the region, including connections on Stagecoach to points north and northwest including Bradford and  
3 Randolph and connections on Connecticut River Transit to points south as far as Brattleboro. Norwich's  
4 riders are mostly commuters going to Dartmouth College or the Dartmouth-Hitchcock Medical Center,  
5 where they do not need personal vehicles during the day and parking is limited.

6 Bus ridership has been growing in Norwich for many years. The decision to make Advance Transit service  
7 free for riders spurred transit use. In 2016 11,354 passengers boarded Advance Transit buses in Norwich.  
8 This compared to 2,168 in 1992.

9 ~~The most efficient form of public transit in the community should be the school bus system, with groups  
10 of passengers (students) going to the same destination at the same time. Still, many parents choose to  
11 drive their children to and from school, contributing to traffic congestion near Marion Cross School and  
12 on Route 10A to Hanover at the beginning and end of the school day.~~

13 ~~A van operated by the White River Council on Aging provides transportation for seniors to the Bugbee  
14 Senior Center in White River Junction, medical appointments and shopping trips. Although donations are  
15 accepted, this service is largely supported by local and federal funding.~~

16 Directing future development in Norwich into the Village Business and Village Residential Districts or  
17 other areas to be designated for future growth (e.g., Commercial/Industrial District) would facilitate the  
18 future expansion of public transportation by creating population and business-related centers within  
19 walking or bicycling distance to pick-up points.

#### 20 Park-and-Ride Lots

21 ~~Siting park and ride lots to intercept commuter traffic at key points would support the use of public  
22 transportation and car pooling. These lots may be serviced by regular bus service or shuttles from specific  
23 employers. Public lots available to anyone on land owned or leased by the town or state may be eligible  
24 for state or federal funding. The use of private lots sponsored by major employers or institutions and  
25 located on private land may be limited to those affiliated with the owner. Either type will promote use of  
26 public transportation and carpooling, thereby alleviating traffic into Hanover and reducing the use of  
27 carbon fuels.~~ Norwich built its first park-and-ride in 2009 at Huntley Meadow off Turnpike Road with 20  
28 parking spaces served by Advance Transit.

#### 29 Air Travel

30 ~~There is no air travel facility located in Norwich. Lebanon Regional Airport is the closest airport that offers  
31 limited passenger and freight services. National and international flights are available from airports in~~

1 ~~Burlington; Hartford, Connecticut; Boston, Massachusetts; and Manchester, New Hampshire. Bus service~~  
2 ~~is available to the Burlington, Manchester and Boston airports.~~

### 3 **Regional Transportation Planning Issues**

4 ~~Regional transportation planning in Vermont is now increasingly the responsibility of the Regional~~  
5 ~~Planning Commissions rather than state highway engineers in Montpelier. The Two Rivers-Ottawaquechee~~  
6 ~~Regional Commission (TRORC) has a Transportation Advisory Committee (TAC) with representatives from~~  
7 ~~its member towns. The TAC creates a Regional Transportation Plan that is coordinated with land use~~  
8 ~~planning and is responsive to local needs and concerns. The Vermont Agency of Transportation will use~~  
9 ~~the Regional Transportation Plan for determining which projects they will fund and the priority of these~~  
10 ~~projects.~~

11 ~~In addition to TRORC, Vital Communities, a regional nonprofit organization based in White River Junction,~~  
12 ~~hosts the Upper Valley Transportation Management Association (UVTMA), which is sponsored by the~~  
13 ~~Upper Valley towns, major Upper Valley employers and both regional planning commissions. The mission~~  
14 ~~of the UVTMA is to provide leadership and education to promote planning, development, and~~  
15 ~~implementation of transportation initiatives to mitigate traffic congestion and reduce reliance on single-~~  
16 ~~occupant vehicle commuting. The UVTMA provides information about alternative transportation,~~  
17 ~~researches transportation issues, and works with towns and businesses on transportation issues and~~  
18 ~~solutions.~~

19 ~~Of regional concern to Norwich is traffic generated in other towns that flows onto Norwich roads and~~  
20 ~~particularly through the Norwich village area. Over time, growth in Sharon, Strafford or Thetford could~~  
21 ~~seriously affect traffic in Norwich village and on Route 132.~~

### 22 **Pedestrian and Bicycle Paths**

23 ~~Safe and convenient pedestrian and bicycle paths connecting the Norwich village area, Hanover, playing~~  
24 ~~fields and recreation areas, and outlying population centers would provide for alternative modes of~~  
25 ~~transportation. Although portions of the village area have sidewalks and there are some existing trails and~~  
26 ~~Class 4 roadways, generally pedestrians and bicyclists share the roads with cars. U.S. Route 5 North has~~  
27 ~~become a major regional bicycle route. Ideally, bicycle lanes should be available along roads for~~  
28 ~~experienced and faster riders, and on separate paths for inexperienced or casual riders and pedestrians.~~

29 The Trails and Transportation Committee has been identifying potential bicycle paths and trails, and  
30 sources of funding. It has also been working with groups from other towns within the region to  
31 coordinate a network of regional trails and bicycle paths. A path connecting Huntley Meadow with the

1 town Green has been a high priority. An Upper Valley Loop Trail connecting Norwich, Hanover, Lebanon  
2 and Hartford is a long-term project supported by the towns and the Upper Valley Trails Alliance. A  
3 connection from Dothan Brook School in Hartford to Route 10A in Norwich is a significant gap that needs  
4 to be planned and completed.

### 5 Norwich Corridor Project

6 ~~The Norwich Corridor Project was conceived and planned in 1999–2000 as a major enhancement of the~~  
7 ~~roadway connecting the newly rebuilt Ledyard Bridge through the village area to Turnpike Road. The~~  
8 ~~master plan reflects the desire of the community to redesign this corridor from its current form, a typical~~  
9 ~~1960s interstate highway access road, to a form more appropriate to its role as a connection between~~  
10 ~~two New England villages by slowing traffic, providing pedestrian and bicycle lanes, and planting street~~  
11 ~~trees and other landscaping. The implementation of this plan has moved slowly over the years, with~~  
12 ~~limited portions incorporated in a 2009 state paving project. Despite the setbacks, the town should retain~~  
13 ~~the vision of this plan for future improvements in the corridor.~~

### 14 Development Review

15 ~~All new development in Norwich should recognize and accommodate the transportation issues identified~~  
16 ~~in this plan. Access to all modes of transportation should be considered in the adoption of new~~  
17 ~~regulations and the review of specific proposals. Using the UVTMA Mobility Checklist will identify many of~~  
18 ~~the features of walkable, smart growth communities that are pedestrian, bicycle, healthy lifestyle and~~  
19 ~~energy conservation friendly.~~

## 20 Goals, Objectives and Actions

### 21 Goal G

22 Plan, maintain and provide for safe, efficient, sustainable, and multi-modal transportation facilities that  
23 serve existing and planned land uses ~~throughout the~~in town and ~~to the~~ region, ~~and are consistent with~~  
24 ~~the character of Norwich and the region.~~

25 Objective G.1 Provide and maintain an efficient and safe network of roads, sidewalks, bikeways  
26 and trails that ~~incorporate rural aesthetics and~~encourage alternative modes of travel.

27 ~~Action G.1.a Maintain an up-to-date bridge and culvert inventory and use that inventory~~  
28 ~~to prioritize and schedule replacements and repairs to those structures.~~

**Comment [RF7]:** No requires as part of Act 64  
so delete

29 Objective G.2 Encourage new development to locate where there is existing transportation  
30 capacity and to meet all the objectives of this section.

**Comment [RF8]:**

1 Objective G.3 Create a long-range plan for creation and maintenance of sidewalks, bikeways,  
2 trails and park-and-ride lots to be updated on a regular schedule.

3 ~~Action G.3.a Proposed major changes in land use, either new development or changes in~~  
4 ~~zoning districts, should be evaluated based on the available or planned capacity of~~  
5 ~~transportation facilities serving the area.~~

**Comment [RF9]:** When you consider zoning changes this is what you do. redundant

6 ~~Action G.3.b For long-range planning for maintenance and capital improvements of roads~~  
7 ~~and bridges, use available and appropriate tools. Plans should be reviewed by the~~  
8 ~~Planning Commission, Conservation Commission and Transportation Committee to~~  
9 ~~ensure coordination with land use planning and resource protection.~~

**Comment [RF10]:** Road Commissioner SB do this, unnecessary

10 ~~Objective G.4 Plan for and develop long-term solutions to traffic congestion, particularly~~  
11 ~~alternatives to widening roads or installing traffic signals.~~

12 Action G.4.a Facilitate Support alternative modes of transportation, such as sidewalks,  
13 bikeways, park-and-ride lots, carpooling and public transit.

14 ~~Action G.4.b Consider how best to promote multi-modal transportation uses when~~  
15 ~~making changes in land use.~~

16 ~~Objective G.5 Consider the aesthetic enjoyment of traveling on the road and effects on wildlife~~  
17 ~~habitat, in addition to safety and cost, in decisions regarding changes within the road right-of-~~  
18 ~~way.~~

19 ~~Action G.5.a Review policies and guidelines to be followed when upgrading town roads,~~  
20 ~~taking into consideration cost, safety, aesthetic enjoyment of traveling on the road,~~  
21 ~~provisions for bike and pedestrian traffic, and other concerns of residents served by the~~  
22 ~~roads.~~

23 ~~Action G.5.b Research potential new design concepts that maintain the characteristics of~~  
24 ~~a small New England village while enhancing the safety of users.~~

25 ~~Action G.5.c Consider effects on wildlife habitat and travel corridors when making~~  
26 ~~changes within road rights-of-way.~~

27 Objective G.6 Promote creation of an interconnected system of trails, paths, bikeways, and  
28 sidewalks to meet the recreation, health, and transportation needs of Norwich residents.

29 Action G.6.a Create and maintain a master plan for future trails, paths, sidewalks, and  
30 bikeways. Use the master plan as a basis for pursuing grants and other funding for  
31 design, right-of-way acquisition, and construction of planned improvements.

1            Action G.6.b Build pedestrian and bicycle paths connecting village centers, recreation  
2            areas, town facilities, and paths to other towns to promote health, safety, and alternative  
3            modes of transportation in Norwich.

4            Action G.6.c Incorporate the needs of cyclists and pedestrians into all transportation  
5            facility planning and review of future development

6            Action G.6.d Accommodate bicycle and pedestrian safety when rebuilding and upgrading  
7            roads and bridges.

8            Objective G.7 Continue to provide additional protection for the exceptional scenic, historical, and  
9            cultural qualities of Norwich’s designated scenic roads under the Norwich Scenic Road Ordinance.

10           Action G.7.a Review and update the current Norwich Scenic Road Ordinance based on its  
11           past effectiveness and current concerns.

12           Objective G.8 Consider the potential value of Class 4 roads, legal trails ~~or ancient roads~~ for  
13           recreational trails or for future roads before any reclassification or change in these roads or  
14           discontinuance of public rights-of-way.

15           ~~Action G.8.a Consider the following prior to re-classifying or discontinuing any Class 4~~  
16           ~~road:~~

- 17           ~~1. — Recreational use, connections to other trails, access to public land~~
- 18           ~~2. — Suitability to upgrade to future Class 3 road based on topography,~~  
19           ~~geology, and environmental impact~~
- 20           ~~3. — Potential for providing access to areas suitable for future development~~  
21           ~~based on land use objectives of town plan~~
- 22           ~~4. — Potential for providing future link between existing Class 3 roads and, if~~  
23           ~~so, benefit to vehicular transportation network and emergency response~~
- 24           ~~5. — Liability to town in current condition~~
- 25           ~~6. — Effect of change of classification on abutting landowners’ use of their~~  
26           ~~property~~
- 27           ~~7. — Historical significance of thoroughfare~~

28           ~~Action G.8.b Consider the following prior to discontinuing any legal trail or ancient road:~~

- 29           ~~1. — Recreational use, connections to other trails, access to public land~~
- 30           ~~2. — Suitability to improve the right of way for vehicular travel or recreational~~  
31           ~~use based on topography, geology, and environmental impact~~

3. Potential for providing access to areas suitable for future development based on land use objectives of town plan
4. Potential for providing future link between existing town roads and, if so, benefit to vehicular transportation network and emergency response
5. Liability to town in current condition
6. Effect of change of classification on abutting landowners' use of their property
7. Historical significance of thoroughfare

Objective G.9 Ensure that all private roads meet basic standards appropriate for Norwich's climate, terrain and rural character in order to protect public safety, infrastructure, and the environment, and promote multiple modes of travel.

Action G.9.a Regulate intersections with private roads and town roads by providing standards for sight distance, intersection angle, percent of grade at intersection, and any other criteria to promote safety and prevent damage to town roads.

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Action G.9.b Encourage the use of shared driveways to reduce the number of private roads intersecting the town roads.

Action G.9.c Continue to regulate the design and construction of private roads serving two or more houses, and private driveways for single-family residences, to facilitate access by emergency and service vehicles, protect public safety and limit environmental impacts.

Action G.9.d Where possible, design private roads to follow existing tree lines, stone walls, ridgelines, or other topographical features and to protect rural character to the greatest extent possible.

Action G.9.e Create guidelines for the design and construction of private roads and driveways to have minimum impact on significant natural resources and scenic views.

Action G.9.f Continue to regulate the design and construction of private roads and driveways to ensure that appropriate stormwater management techniques and infrastructure are used to minimize run-off, sedimentation and flooding of downslope infrastructure, property and waterways.

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Objective G.10 Balance the decision to retain the town's ancient road rights-of-way for the benefit of town residents.

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Objective G.11 Increase awareness and use of existing public transportation to reduce future traffic congestion in the town and region, environmental impact, and wear-and-tear on roads.

1            Action G.11.a Promote use of public transportation by providing park-and-ride lots, bike  
2            racks at bus stops, bike racks on buses, small bus stop shelters, and similar improvements  
3            to make public transit more convenient.

4            ~~Action G.11.b Revise land use regulations to allow both public and private park and ride~~  
5            ~~facilities in key locations to allow commuter traffic to transfer from single-occupant~~  
6            ~~vehicles to public or private busses or carpools.~~

7            ~~Action G.11.c Facilitate carpooling through use of ride share physical or electronic~~  
8            ~~bulletin boards.~~

**Comment [RF11]:** Look at your phone

9            Objective G.12 Encourage more students to use the school bus system to alleviate traffic  
10            congestion in the village.

**Comment [RF12]:** It is the parents

11            ~~Action G.12.a Create programs to educate parents and students of the advantages of~~  
12            ~~using the school bus system.~~

13            ~~Action G.12.b Design or plan any improvements to the school's traffic circulation pattern,~~  
14            ~~access drive or parking area primarily to accommodate safe bus transportation, walking~~  
15            ~~and cycling, and to discourage parents from driving to the school to drop off and pick up~~  
16            ~~students.~~

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17            ~~Objective G.13 Coordinate transportation and land use planning with surrounding towns.~~

**Comment [RF13]:** Already happens (TAC)

18            ~~Action G.13.a Meet with officials from surrounding towns to discuss planning objectives~~  
19            ~~and specific proposals that impact both towns.~~

20            ~~Objective G.14 Incorporate the following UVTMA Checklist Goals into land use planning and~~  
21            ~~development review where feasible.~~

- 22            1. ~~Proximity to Services, Employment, and Transit. The most effective way to~~  
23            ~~reduce single-occupant vehicle (SOV) transportation is to locate housing near~~  
24            ~~services and employment and on transit routes.~~
- 25            2. ~~Pedestrian and Cyclist Orientation. These features encourage people to walk and~~  
26            ~~cycle instead of getting into their automobiles. Routes for pedestrians and~~  
27            ~~cyclists within the proposed development should be convenient, attractive and~~  
28            ~~safe. The design also should provide for the easy use of strollers, scooters, roller~~  
29            ~~blades, walkers and wheelchairs.~~
- 30            3. ~~Density/Location. Concentrated development in appropriate places supports~~  
31            ~~pedestrians, cyclists, and public transportation opportunities.~~



- 1 | ~~4. — Mix of Uses. In appropriate places, transit stops should have a mix of residential,~~
- 2 | ~~civic, and commercial land uses, as well as other land uses nearby. The mix~~
- 3 | ~~should offer people opportunities to live and work close to transit, to obtain at~~
- 4 | ~~least basic goods and services, and to use transit to travel to other places.~~
- 5 | ~~5. — Parking. Parking should be minimized while encouraging active transportation~~
- 6 | ~~alternatives to the SOV.~~

7 | Objective G.15 Participate actively in the regional transportation planning process to ensure that  
8 | regional plans support the goals, objectives and policies of the Norwich Town Plan and that  
9 | Norwich takes advantage of regional solutions to transportation issues affecting town residents.

10 | Action G.15.a Ensure regular representation to all regional transportation entities, such  
11 | as UVTMA, Advance Transit, Upper Valley Trails Alliance, etc.

12 | Action G.15.b Investigate the possibility of passenger train service.